

REMARKS

Claims 3, 5-8, 11, 14-17, and 22-31 are currently pending. Reexamination and reconsideration of the application are respectfully requested.

REJECTION OF CLAIMS 3, 5, 11, 14, and 22-30 UNDER 35 U.S.C. 102

Claims 3, 5, 11, 14, and 22-30 are rejected under 35 U.S.C. 102(e) for the reasons set forth on pages 3-4 of the Action. Specifically, claims 3, 5, 11, 14, and 22-30 are rejected under 35 U.S.C. 102(e) as being anticipated by Yonemoto et al. (US Pat. No. 6,166,769), which is hereinafter referred to as "Yonemoto" or as "the Yonemoto reference."

The rejections under 35 U.S.C. 102(e) are respectfully traversed, and reconsideration and reexamination of the application is respectfully requested for the reasons set forth herein below.

The Federal Circuit has ruled, "Under 35 U.S.C. §102, anticipation requires that each and every element of the claimed invention be disclosed in the prior art. . . . In addition, the prior art reference must be enabling, thus placing the allegedly disclosed matter in the possession of the public." Akzo N.V. v. United States Int'l Trade Comm'n, 1 USPQ 2d 1241, 1245 (Fed. Cir. 1986), cert. denied, 482 U.S. 909 (1987). [emphasis added.]

Furthermore, the Federal Circuit has held, "Anticipation requires the disclosure in a single prior art reference of each element of the claim under consideration." W.L. Gore & Assocs. v. Garlock, Inc., 220 USPQ 303, 313 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984). [emphasis added.]

It is respectfully submitted that the Yonemoto reference fails to teach or suggest each and every element of the system as claimed. For example, the Action cites elements 38 and 38' of Yonemoto et al. taken together to teach the first sampling circuit as claimed. However, elements 38 and 38', whether alone, or in combination fail to fairly teach or suggest the first sampling circuit, the first switch, and the specific limitations regarding the coupling between the first sampling circuit and the first switch as required by independent claims 22 and 23.

For example, FIG. 1 and 4 of Yonemoto et al. clearly show that element 38 is a capacitor that has a first terminal that is coupled to both a source electrode of transistor 37 and the drain electrode of transistor 39 and a second terminal that is coupled to a ground potential. Similarly, FIG. 1 and 4 of Yonemoto et al. clearly indicate that element 38' is a capacitor that has a first terminal that is coupled to both a source electrode of transistor 37' and the drain electrode of transistor 39' and a second terminal that is coupled to a ground potential. In either case, the second terminal of the capacitor (38 or 38') is coupled to the ground potential and not coupled to the first electrode of the first switch as claimed.

Furthermore, the Action states on page 2, paragraph 2, lines 5 and 6 that the "electrode of 38 near 37" and the "electrode of 38 near 39" teach the first electrode first sampling circuit and the second electrode of the first sampling circuit, respectively, as claimed. However, it is respectfully submitted that the "electrode of 38 near 37" and the "electrode of 38 near 39" appear to be the same node (i.e., a common node or terminal that share the same electrical signal). The same node of Yonemoto et al. cannot be utilized to anticipate two different electrodes as claimed that are coupled to different components.

Moreover, it is respectfully submitted that the "electrode of 38 near 39" does not fairly teach or suggest the second electrode of the first sampling circuit as claimed because the "electrode of 38 near 39" is coupled to a ground potential whereas the second electrode of the first sampling circuit, as claimed, is coupled to the first electrode the first switch.

As admitted by the Action, either capacitor 38 or capacitor 38' alone cannot anticipate the first sampling circuit as claimed since the first sampling circuit as claimed is required to sample both the light signal and the reset signal for the associated column and either capacitor 38 or capacitor 38' by itself samples only the light signal or the reset signal but not both. In other words, Yonemoto utilizes a first capacitor 38 for sampling the signal value before pixel reset and a second, separate capacitor 38' for sampling the signal value after pixel reset. Moreover, Yonemoto clearly indicates that two sample and hold circuits (a first signal holding circuit 51 and a second signal holding circuit 52) are utilized per column in its solid-state imaging device. In sharp contrast, the claimed invention employs for each column a single sampling circuit that samples both a light signal and a reset signal from a photocell as claimed.

Consequently, the Action uses the combination of capacitor 38 and capacitor 38' to teach the first sampling circuit as claimed. However, using capacitor 38' to anticipate the first sampling circuit poses several problems. First, whereas the claimed invention requires a first sampling circuit that is coupled to the first switch, which in turn is coupled to the amplifier as claimed, the capacitor 38' is coupled to a switch (transistor 39') that is different from the switch (transistor 39) to which capacitor 38 is coupled. Also, transistor 39' is coupled to an amplifier in block 46' that is different from the amplifier in top block 46 to which capacitor 38 is coupled. Second, it is not

clear how the signal sampled by capacitor 38' is provided to transistor 39, which the Action is using to teach the first switch as claimed. Instead, it appears that the signal sampled by capacitor 38' is provided to second horizontal signal line 87 through a different switch (transistor 39'). In this regard, it is respectfully requested that the Advisory Action clarify how the terminals of capacitor 38 and capacitor 38' correlate or correspond to the first and second electrodes of the first sampling circuit as claimed.

The following excerpt from the description of FIG. 4 of Yonemoto supports the previously presented interpretation of Yonemoto:

The first operation switches 37, the first load capacitance elements 38, and the first horizontal switches 39 jointly make up a first signal holding circuit 51 for holding signals of the pixel MOS transistors before the pixels are reset. The second operation switches 37', the second load capacitance elements 38', and the second horizontal switches 39' jointly make up a second signal holding circuit 52 for holding signals of the pixel MOS transistors after the pixels are reset.

The dependent claims incorporate all the limitations of independent claims 22 and 23, respectively. In this regard, the dependent claims also add additional limitations, thereby making the dependent claims a fortiori and independently patentable over the cited reference.

In view of the foregoing, it is respectfully submitted that Yonemoto reference, whether alone or in combination, fails to teach or suggest the sequential readout circuit and system as claimed.

REJECTION OF CLAIMS 6, 7, 8, 15, 16 and 17 UNDER 35 U.S.C. 103(a)

Claims 6, 7, 15, and 16 are rejected under 35 U.S.C. 103 on pages 3 and 4 of the Action as being unpatentable over Yonemoto et al. (U.S. Pat. No. 6,166,769) in view of Simerly et al. (U.S. Pat. No. 5,982,424). Also, claims 8 and 17 are rejected under 35

U.S.C. 103 on page 4 of the Action as being unpatentable over Yonemoto et al. (U.S. Pat. No. 6,166,769) in view of Krymski et al. (U.S. Pat. No. 6,222,175).

The Action states that Yonemoto does not disclose level shifting circuit or gain manipulation circuit as claimed. However, the Action cites Simerly et al. (col. 7, lines 35-47) for teaching "level shifting and gain manipulation in a similar system." The Action further states "it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to provide such a configuration in the apparatus of Yonemoto to improve detection." Krymski is cited to teach a photocell circuit.

The rejections under 35 U.S.C. 103 are respectfully traversed, and reconsideration and reexamination of the application are respectfully requested for the reasons set forth hereinbelow. The combination of the readout circuit of Yonemoto with "level shifting and gain manipulation," purportedly taught by Simerly et al., is contested as improper for the reasons advanced in responses to previous Actions. However, even if this combination were proper, which is not conceded, the resulting combination would still fail to teach or suggest the claimed invention.

It is respectfully submitted that the combination of Yonemoto and Simerly (or Yonemoto and Krymski) fails to teach or suggest the invention as claimed for the same reasons as advanced previously. Simerly and Krymski do not cure the deficiencies of Yonemoto. Specifically, it is noted that the Yonemoto reference, whether alone or in combination with Simerly et al. or Krymski, fails to teach or suggest inter alia the following claim limitations: "wherein the first sampling circuit samples a light signal and a reset signal from each photocell in the first column," and the specific coupling of the first sampling circuit with the first switch as recited in amended claims 22 and 23.

It appears that the current patent application has been improperly used as a basis for the motivation to combine or modify the components selected from Yonemoto, Simerly or Krymski to arrive at the claimed invention. Stated differently, the proposed combination of the cited references appear to be based on hindsight since the cited references do not teach or suggest a motivation to combine the respective elements of each reference in the manner proposed by the Action. Accordingly, it is respectfully requested that the rejection of claims 6, 7, 8, 15, 16 and 17 under 35 U.S.C. 103(a) be withdrawn.

For all the reasons advanced above, it is respectfully submitted that the application is in condition for allowance. Reexamination and reconsideration of the pending claims are requested, and allowance is earnestly solicited at an early date. The Examiner is invited to telephone the undersigned if the Examiner has any suggestions, thoughts or comments, which might expedite the prosecution of this case.

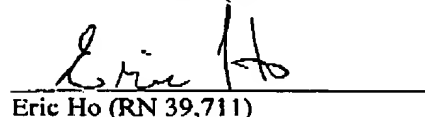
Respectfully submitted,



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Dated: Oct. 8, 2005

I hereby certify that this paper is being facsimile transmitted to the U.S. Patent and Trademark Office (fax no.: 571-273-8300) on the date below.


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Oct. 8, 2005
(Date)